

REMARKS

This amendment is submitted to be fully responsive to the non-final Office Action of Paper No. 20060831. By way of this amendment, claims 1-3 and 5-8 are amended and claim 10 is canceled. Support for the claim amendments is found within the claims as filed and are provided to provide better form and antecedent basis for the pending claims. Support for the amendments to claims 2 and 8 in regard to relative stiffness is found in the specification at page 6, lines 1-3. New claim 11 has been added. Support for new claim 11 is found *inter alia* at page 5, lines 16-17. As such, it is submitted that no new matter has been added to the application by way of this amendment.

Currently, claims 2 and 8 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite with regard to the term “relatively stiff materials.” In light of the above amendments to claims 2 and 8, this rejection is believed to have been overcome and as such reconsideration and withdrawal of the rejection as to claims 2 and 8 under 35 U.S.C. §112, second paragraph, is hereby requested.

Additionally, pending claims 1-9 stand rejected under 35 U.S.C. §103(a) over Shimamura et al. (U.S. 4,737,153) in view of Onik (U.S. 5,693,011).

Applicant respectfully submits that pending independent claim 1 has a claim recitation not found in the prior art with respect to the cage member fixed to the exterior of the intake end of an elongated flexible body member that has “a plurality of longitudinally stringers and a plurality of annular rings attached to the stringers.” (Claim 1, lines 8-9). This recitation of claim 1 is nowhere found in the prior art and is entitled to patentable weight. Alternatively, the prior art combination fails to afford the claimed invention on the basis of this claim language.

The basis of the rejection is that Shimamura discloses a reinforced catheter with a rigid helical support embedded therein. (Paper No. 20060831, section 5, page 2). Shimamura is found to be deficient relative to the teachings of claim 1 in lacking a cage member. Onik is cited to bolster the teachings of Shimamura in this regard with respect to reference numerals 44 and 45 in the figures and also detailed in column 2, lines 45-50 and 60-65. The stated basis for this combination is that "it would have been obvious to one of ordinary skill in the art at the time of invention to modify the catheter of Shimamura to include a cage member as taught by Onik to prevent the apertures from becoming clogged, thereby maintaining an open flow of material from the catheter." (Paper No. 20060831, section 6, page 3).

As an initial matter, motivation to prevent the apertures from becoming clogged while applicable to a surgical suction cutting instrument per Onik is inapplicable to the claimed invention which pertains to a venous cannula. As such, an inventive cannula is only exposed to blood and rather, allows to one to draw a vacuum from the cannula while maintaining a gap relative to the tissue walls of the heart so as to allow blood flow into the inventive cannula (page 3, lines 7-8). As such, Applicant submits that one of ordinary skill in the art developing a venous cannula would lack the motivation as detailed in the outstanding Office Action.

Pending claim 1 recites "a plurality of longitudinally stringers and a plurality of annular rings attached to said plurality of stringers." Applicant submits that this limitation is nowhere found in the prior art. Rather, as Shimamura is silent as to a cage, all teachings in this regard must be found within Onik. However, Onik fails to teach a plurality of rings and instead forms the guard 44 by bowing a hollow sleeve 45. (Column 3, lines 1-3). As such, Onik and the prior art reference combination as a whole lacks not only the plurality of annular rings, but also the longitudinal aspect of the stringers. Additionally, independent claim 1 recites a tip portion

having a plurality of openings formed in the wall. The specification details the importance of being able to draw blood through the inventive venous cannula regardless of which side of the cannula might contact the heart wall. In contrast, the sleeve 45 having the bowed guard 44 only provides a single opening above port 36 through which there is fluid communication between the interior of the cannula and the surrounding tissue. As such, the sleeve of Onik would foreclose communication between all the tip portion openings according to claim 1 with the exception of those directly underlying the gap between the two guards 44 (see Figs. 3 and 4 of Onik).

Combining the teachings of Shimamura and Onik for argument's sake would therefore yield a sleeve of Onik slipped over the tip portion of a catheter according to Shimamura. The resulting hypothetical device would not provide circumferential access to all tip portion openings for communication between the exterior of the cannula and the internal bore, rather only those openings underlying the gap between guards 44 of Onik would be able to draw material therethrough. This prior art reference combination hypothetical device is inconsistent with the recitation of independent claim 1 that recites radial openings that remain open to the flow of blood despite the presence of the cage member. This feature is nowhere found in the prior art reference combination.

In light of the above remarks, claim 1 is submitted to be nonobvious over the prior art of record.

With respect to claims 4 and 9, Onik is cited as teaching "the cage member is in a common cylindrical plane to allow the catheter to have a low profile so that it can more easily pass through body lumens (Col. 3, lines 30-35)." (Paper No. 20060831, section 7, page 3). Applicant submits that the Examiner's reliance on the teachings of Onik with respect to column 3, lines 30-35 is misplaced as this embodiment of Onik only has a wire 54 that lies flat against

the tube and overlies the port 36 (see Fig. 9). For Onik to produce a low profile catheter, not only have the rings been removed but also the port 36 has been in part occluded. As these features are recited in independent claim 1, and the subject matter of claims 4 and 9 calls on rings being present, Applicant submits that the subject matter of claims 4 and 9 is patentable separate from dependence from claim 1, now believed to be in allowable form.

In light of the above amendments and remarks, reconsideration and withdrawal of the rejection as to claims 1-9 under 35 U.S.C. §103(a) over Shimamura in view of Onik is requested.

Summary

Claims 1-9 and 11 are pending in the application. By way of this amendment, claims 1-3 and 5-8 have been amended. Claim 10 has been canceled and new claim 11 has been added. All the pending claims are now believed to be in allowable form and directed to patentable subject matter. Reconsideration and withdrawal of the rejections is requested. Should the Examiner have any suggestions as to how to improve the form of the claims, it is respectfully requested that the undersigned attorney be contacted.

Dated: December 19, 2006

Respectfully submitted,

By: Avery N. Goldstein, Ph.D./

Avery N. Goldstein, Ph.D.

Registration No.: 39,204

GIFFORD, KRASS, GROH, SPRINKLE,

ANDERSON & CITKOWSKI, P.C.

2701 Troy Center Drive, Suite 330

Post Office Box 7021

Troy, Michigan 48007-7021

(941) 488-4245

(941) 484-5258 (Fax)

Attorney for Applicant